

COLGATE & COMPANY JERSEY CITY PLANT: B-4
(Colgate-Palmolive Company Jersey City Plant: B-4)
43-45 York Street
Jersey City
Hudson County
New Jersey

HAER No. NJ-71-G

HAER
NJ
9-JERC1,
18G-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Northeast Area Office
National Park Service
U.S. Custom House
200 Chestnut Street
Philadelphia, PA 19106

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Location: 43-45 York Street, Jersey City, New Jersey

Present Owner/Occupant: Colgate-Palmolive Company
300 Park Avenue
New York, New York 10022

Present Use: Demolished 1989.

Significance: B-4 was significant as one of the first structures built by Colgate & Company for manufacturing purposes, and was used continuously for soap manufacture longer than any other building at the factory as of 1988. Located in the Exchange Place area of Jersey City, the structure was part of B Block, the oldest part the company's large Jersey City manufacturing plant and the core of its soapmaking. The brick-bearing building was characteristic of mid-to-third-quarter 19th century industrial design, with Romanesque Revival features, and was one of several such B-Block structures built along York Street at this time. All decorative features on the five-story building were confined to exterior masonry. The structure was altered as the needs of the plant dictated. It was demolished in early 1989.

Part I. HISTORICAL INFORMATION*

A. Physical History:

1. Date(s) of erection: Colgate & Company probably built B-4 c1855-65 (cf. Dripps 1850; Jersey City directory 1855-56; Culver 1866; Washington Fire Insurance Company 1872).
2. Architect: Unknown
3. Original and subsequent owner(s): Colgate & Company; Colgate-Palmolive-Peet Company; Colgate-Palmolive Company (Hudson County Deed Books 1845).
4. Builder, contractor, suppliers: Unknown
5. Original plans and construction: No original plans have survived, but maps, descriptions and views c1866-79 indicate B-4 retained its original exterior design through its entire history (cf. Farrier 1879).
6. Alterations and additions: Some original wood and cast iron framing members were probably replaced in undocumented 19th-century alterations which included removal of a steam-powered elevator (cf. Culver 1866). Steel I-beams replaced most original cast-iron columns and all wood floor beams with , in a variety of configurations, by c1909. Soap kettle or tank reinforcement and rebuilding episodes, c1923 and 1951-54, sometimes included new or added I-beams. Exterior openings below the third floor were brick infilled, many foundation elements rebuilt, and a roof monitor removed c1952. By 1988, most other windows were infilled with brick or glass block. At a number of undocumented times, interior partitions and flooring were added, removed, or modified.

There were several rear additions. The first, erected by 1866 to hold lye tubs, was removed by the mid-1880s (Culver 1866; Hopkins 1873; Bromley 1887). Colgate's then-largest soap kettle, capable of making one million pounds of soap, was built within a five-story polygonal tower c1903, and converted to make early sprayed soap products c1926 (Associated Mutual Insurance Company 1922; Crooker 1931). A steel-framed two-story addition clad with varied material, known as B-4-Extension (B-4-Ext), was erected at about the same location c1950, but was used in conjunction with operations in other B Block structures.

* Capitalized references are photographs included with this documentation, or with other documentation packages for HAER No. NJ-71 and associated structures.

B. Historical context:

This structure was one of the earliest Colgate factory buildings in Jersey City for soap kettle and related facilities, and was probably the second created specifically for that purpose (see B-3, HAER No. NJ-71-F). B-4 retained this basic function throughout the operating history of the Jersey City plant. The structure was demolished along with the rest of B Block in 1989.

Part II. ARCHITECTURAL INFORMATION

A. General statement

1. Architectural character: B-4 was a five-story, vernacular Italianate structure with Romanesque Revival detailing, with six exterior bays and a hipped roof. The brick bearing building was ornamented with round and segmentally arched windows, a granite block basement, bluestone springing blocks for the arches and the window sills, and an ornately dentillated and corbelled brick entablature.
2. Condition of fabric: Until its demolition in 1989, the structure was in very good condition. Many original foundation and interior elements had disappeared during repeated modifications, but the York Street facade retained virtually all original detailing despite the infilling of most openings.

B. Description of Exterior:

1. Over-all dimensions: 43 by 84 feet (see HAER No. NJ-71-D Figure 1)
2. Foundations: Original foundations included 30-inch-thick exterior brick walls and, probably, interior brick piers on brick and stone footings arranged in three north-south rows of seven. Alterations made c1952 to increase the floor loads above replaced most interior foundation elements with massive concrete piers, steel I-beam reinforcement and a poured-concrete basement floor.
3. Walls: B-4 was a five-story, brick-bearing industrial building. The York Street facade had six bays and a tri-partite horizontal division of spaces created by belt coursing between the first and second stories and the third and fourth stories. The corners of the building were emphasized by protruding pilasters which, at the top of the structure, formed the edges of an elaborate entablature (HAER No. NJ-71, B-4 [RIGHT] AND B-5 NORTH ELEVATIONS).

On York Street, the basement exterior consisted of three courses of rough-faced gray granite block finished with a smooth edge. The coursing sloped to accommodate the easterly street slope down towards the river. There were originally four basement-level windows, bricked-in c1952. The first floor consisted of four round-arched windows and a large round-arched entrance in the westernmost bay; the second floor consisted of six round arched windows. All of these were filled in with mismatched brick and bond. The original wall bond was stretcher-laid with hard-faced machine made brick and butter joints. The infill was common bond with wide joints. The round masonry arches of the first and second floors had flat gauged brick arches springing from bluestone blocks. Inside these arches, which were flush with the wall surface, were deeper, narrower inset arches resulting in a dramatic shadow line. The bluestone springing block continued into the protruding corner pilasters. The sills of the second floor windows were continuous, creating a belt course separating the two lower stories (HAER No. NJ-71, B-4 [RIGHT] AND B-5 NORTH ELEVATIONS).

The third floor facade treatment was simpler, with narrower and smaller windows. Here there was no inset interior arch, only the flush exterior arch. The bluestone sills were also discontinuous. Four of the six windows still contained the original deeply-inset wood jambs, with wooden round-arched 4/4 double-hung windows, in 1988. The center two bays were brick infilled. The window jamb mouldings stepped back twice to give the appearance of a deeper inset (HAER No. NJ-71, B-4 [RIGHT] AND B-5 NORTH ELEVATIONS).

Above the third floor windows was a continuous bluestone belt course, below which was a brick stretcher course followed by a dentil course made from brick headers. The fourth floor windows, which increased in size, were identically detailed to those of the second floor except for the infilling. On the fourth floor the end two bays were infilled, the center four bays had wood 4/4 double hung windows. The fifth floor fenestration consisted of segmentally arched, narrow windows with flush single arches, stone sills and obscure glass block infilling with hoppers for ventilation. (HAER No. NJ-71, B-4 [RIGHT] AND B-5 NORTH ELEVATIONS).

The brick entablature was best described as embroidered. The architrave consisted of a single brick course surmounted by a billeted course (headers set on an angle). The frieze was embellished with corbelled V-shaped dentils with cross-shaped cutouts inside each dentil. The cornice consisted of a fillet surmounted by a dentil course, and was carried around all four sides of B-4. Above the cornice on the south side, a truncated-gable, brick end wall survives from a polygonal tower used for early sprayed soap and detergent products c1921-47

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(Associated Mutual Insurance Company 1922; HAER No. NJ-71, B-4 [RIGHT] AND B-5 NORTH ELEVATIONS, and EAST HALF OF B BLOCK, VIEW EAST [left center]).

4. Structural systems, framing: B-4 was a brick-bearing structure, with exterior brick walls decreasing in thickness from thirty to fifteen inches from the foundations to the fifth floor. A few 10-by-10-inch wood columns suggest original floors were perhaps entirely wood framed, but by the late 19th century cast-iron columns supported wood flooring systems in most places, with beams and joists pocketed into the exterior walls. Tie rod anchor plates were visible in the east wall of the building. Most surviving first and second floor iron columns had splayed capitals to support the beams, and were bolted together vertically around the beams. Wood floor joists varied in size and spacing, and survived with much probable original fabric. At the basement and first floor levels, vertical members were arrayed in three north-south rows of seven, defining four-by-eight approximately same-sized interior bays. From the second floor up, original columns ran longitudinally through the building center. Above the 8.8-foot-high basement, original floor heights defined by this framing were 12.7 feet (first floor), 10.8 feet (second floor), 11 feet (third and fourth floors), and 16 feet (fifth floor) for a total exterior wall height of about 71 feet. King-post wood trusses, linked with paired ridgeboards, supported the hipped roof.

Selective reinforcement through the years replaced all floor beams with steel I's, often paired. Composite steel columns replaced or reinforced many original cast-iron members, and, along with I-beam joists, supported brick barrel-vaulted ceilings along parts of the west side of the first, second, and third floors; these ceilings were in inserted, partial third bays on the second and third floors (DETAIL OF BRICK BARREL VAULTS, THIRD FLOOR CEILING, TO WEST).

5. Chimneys: Multiple metal vents.
6. Openings:
 - a. Doorways and doors: There were no usable exterior doors on the structure. The single street level entrance on York Street, located in the westernmost bay of the ground floor, was brick infilled in 1952. An opening in the south wall gave access to the rear extension at ground level (see II.B.8 below).
 - b. Windows: The original windows were round arched wood 4/4 double hung windows on all the floors, except for the fifth where the windows were segmentally arched. Prior to its demolition, there were only eight original windows left; the

fifth floor windows were infilled with obscure glass block and the remaining windows were bricked-in.

7. Roof:

- a. Shape, covering: The hipped roof was clad with a seamed bituminous material. A monitor was removed c1952.
- b. Cornice, eaves: The elaborate brick entablature is described in Section II.B.3.

8. Rear Extension: An irregularly-shaped, two-story steel-framed structure (B-4-Ext) abutted the south side of B-4, clad in a mixture of corrugated and/or asbestos-covered metal and transite (see HAER No. NJ-71-D, Figure 2). B-4-Ext, which extended behind part of B-3 as well (HAER No. NJ-71-F), was a single open space with an interior platform at the west end. It was accessed from many B-Block structures via ground-level doorways, and a stairway on its roof.

C. Description of interior:

- 1. Floorplans: The overall plan of each floor was an open rectangle, broken up by the columns or piers noted above and some interior partitions. Although the original structure had a steam-powered elevator on the north side (Culver 1866), there were no 20th-century interior stairways or elevators. Access to the structure was through one of two sliding fire doors located on each floor between the first and second row of columns from the north. These passageways connected B-4 with B-3 on its west and B-5 on its east (HAER Nos. NJ-71-F and NJ-71-H). Since the floor level of B-4 was approximately two feet lower than that of B-3, a ramp was utilized to connect the two structures. Most of the floors were taken up by soap tanks and kettles, as noted below (II.C.6).
 - a. Basement through Third Floors: A cinderblock partition wall, extending from the basement to the top of the third floor, separated the north bay from the rest of the building. This was done to accommodate and fireproof three cylindrical tanks whose tops reached the third floor level, at which height an open grille catwalk followed the northern wall over the tanks below (NORTH END OF SECOND AND THIRD FLOORS TO NORTHEAST, WITH FINISHED SOAP TANKS). The partition wall on the first floor followed a non-linear course to circumvent the earlier ramp to B-3. There was an additional cinderblock enclosure at the southwest corner of the third floor.

- b. Fourth and Fifth Floor: Both floors featured open floor plans filled with kettles, pipe flues, and piping. On the fifth floor, some piping hung from north-south wooden beams resting on the lower chords of the roof trusses (FIFTH FLOOR TO SOUTHWEST).
 - c. B-4-Ext: B-4-Ext had no floors, serving essentially as a shed for tanks, one of which rested on an interior platform.
- 2. Flooring: Metal plates reinforced original wooden floors.
 - 3. Wall and ceiling finish: All brick walls and wood ceilings had painted surfaces, except in the north bay tank enclosure. The interior of the roof was finished in approximately 8-inch-wide ceiling boards, also painted.
 - 4. Openings:
 - a. Doorways and doors: Heavy metal-clad sliding fire doors.
 - b. Windows: Original windows had simple wooden casings; most were removed when the masonry openings were infilled.
 - 5. Equipment: B-4 had a variety of kettles and cylindrical tanks for soap manufacture in 1988. The three 12-foot-diameter, 30-foot-high tanks in the enclosed northern bay, extending from the basement through the second floor level, stored finished soap or, before 1954, lye. The basement also had one simplex and one duplex steam soap pump, installed c1954 in the northeast corner near these tanks. Three 19-foot diameter soap kettles rested on the east side of the second floor, two of which extended up to the fourth floor while one reached the fifth floor (FIFTH FLOOR TO SOUTHWEST). A number of earlier lye and soap tanks were removed in the 1950s. One chain fall trolley survived in the northeast corner of the fourth floor in 1988.

B-4 utilities included steam heat supplied by the plant boiler house (HAER No. NJ-71-T). Original 20th-century lighting was probably via small incandescent fixtures, replaced by fluorescent lights.

B-4-Ext contained storage tanks for several plant processing areas (at various times, glycerine and liquid detergent base) plus at least one condensate tank.

D. Site

B-4 was part of the picturesque streetscape on the north side of B Block, dominated by mid-to-late 19th-century, pedestrian-scale brick industrial buildings. Sandwiched between buildings B-3 and B-6, B-4 was located approximately mid-block (HAER No. NJ-71, NORTH SIDE OF B BLOCK [two views]).

PART III. SOURCES OF INFORMATION

A. Original Architectural Drawings:

Colgate-Palmolive Company retains linen or blueprint copies of most, though not all, 20th-century plans and drawings made for B-4; no 19th century drawings have survived. Drawings listed below pertain to the structure and major equipment elements; some other plans of operating hardware are not listed. As of late 1989, these documents are maintained by the engineering department in the plant's L Block (HAER No. NJ-71-SS). Future researchers should contact the company's Office of Corporate Communications at 300 Park Avenue, New York, NY 10022, for access.

Anonymous

1909 Building ---, Crillage for Pan 13. [drawing torn; possibly by William P. Field].

1923 Crillage under Pans -- 12 & 13/Colgate & Co. Dwg. No. 2-1912.

Colgate & Company/Colgate-Palmolive-Peet Company/Colgate-Palmolive Company
c1906 First Floor & Basement Plan/"E" Building (B-4). Dwg. No. 2-1153.

1951a Kettle Coils for New Kettle #12 - B-4. Dwg. No. 2-1688.

1951b Details of Cons't for Soap Kettles #11 & #13/B-4-2-5.
Dwg. No. 2-3200.

1952 B-4 Bldg Rehabilitation [set of 10, with drawing numbers]:

Plot Plan	2-3379	Fourth Floor Plan	2-3384
Basement Plan	2-3380	Fifth Floor Plan	2-3385
First Floor Plan	2-3381	Roof Plan	2-3386
Second Floor Plan	2-3382	Front Elevation & Section	2-3387
Third Floor Plan	2-3383	Sectional Elevation Looking East	2-3388

1954a B-4 Bldg Rehabilitation, Lighting Layout for [6 plans, with drawing numbers]:

Basement	2-1382	Third Floor	2-1385
First Floor	2-1383	Fourth Floor	2-1386
Second Floor	2-1384	Fifth Floor	2-1387

1954b Alterations to Tanks for Lye Storage/B-4 Rehabilitation.
Dwg. No. 2-3652

1954b Vent Piping for Lye Storage Tanks/B-4 Rehabilitation.
Dwg. No. 2-3650

1954c Foundation Locations for Lye Tanks and Pumps/B-4
Rehabilitation. Dwg. No. 2-3601

1964 Modification to Roof/B-4 Extension. Dwg. No. 2-4980.

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- 1972a Layout of Process Piping for New Tank in B-4 Ext.
 Dwg. No. 2-6681.
- 1972b Install Pump and Piping at New Glycerine Tank/B-4 Ext.
 Dwg. No. 2-6682
- 1972c Relocate & Install Steel Beams for New Glycerine Tank/B-4 Ext.
 Dwg. No. 2-6567.
- 1976a New Roof Enclosure/B-4-X. Dwg. No. 2-7499.
- 1976b New Steel Frame for Enclosed Stairway/B-4-X. Dwg. No. 2-7511

Lloyd W. Weed, Consulting Engineer [New York City]
1953 [many drawings for alterations, based on 1952 drawings listed
 above]

B. Historic Views:

A few late-19th or early 20th-century photographs of the north side of B Block show B-4, the most accessible of which appears on page 172 of Farrier 1879 (cited below). The north exterior remained unchanged until the 1950s, so these views provide little new information. All known aerial views of the plant were taken from the southeast, showing B-4 only as a hipped roof.

C. Interview:

Colgate-Palmolive Company plant engineer Theodore Mrowzinski provided some information on 20th century rear additions to B-4.

D. Bibliography:

1. Primary and unpublished sources:

Hudson County Deed Books

1845 Vol. 12, p. 570.

Washington Fire Insurance Company of New York

1872 Policy of Insurance No. 2288, May 15, 1872. Original in
 possession of Carter Litchfield, Kemblesville, PA.

Associated Mutual Insurance Company

1922 Colgate & Co. (Soap and Toilet Supplies). Surveyed November 8,
 1922.

2. Secondary and published sources:

- Crooker, H.M.
1931 Soap Boiling Department. The Pulse III,8: 9-10.
- Culver, I.B.
1866 Map of Jersey City. On file, New York Public Library.
- Dripps, M.
1850 Map of Jersey City and Van Vorst Township, New Jersey. New York.
- Farrier, George H.
1879 Centennial Celebration of the Battle of Paulus Hook, August 19th, 1879... Jersey City: M. Mullone.

Jersey City directory 1855-56, on file, Jersey City Public Library.

E. Likely Sources Not Yet Investigated:

Building permit records held by Colgate-Palmolive Company and/or the City of Jersey City may have data on some 20th-century alterations to B-4, but will probably add little data not noted somewhere on available plans and drawings.

PART IV. PROJECT INFORMATION

Colgate-Palmolive Company began phasing out its Jersey City operations in 1985, moving them to other company plants. In 1987, the company announced plans to demolish the plant beginning in 1988, and to redevelop the 34-acre site for mixed commercial, residential, and commercial use. Recognizing the plant's historic significance, Colgate-Palmolive donated historical, descriptive, and photographic data on the office building to the Historic American Engineering Record.

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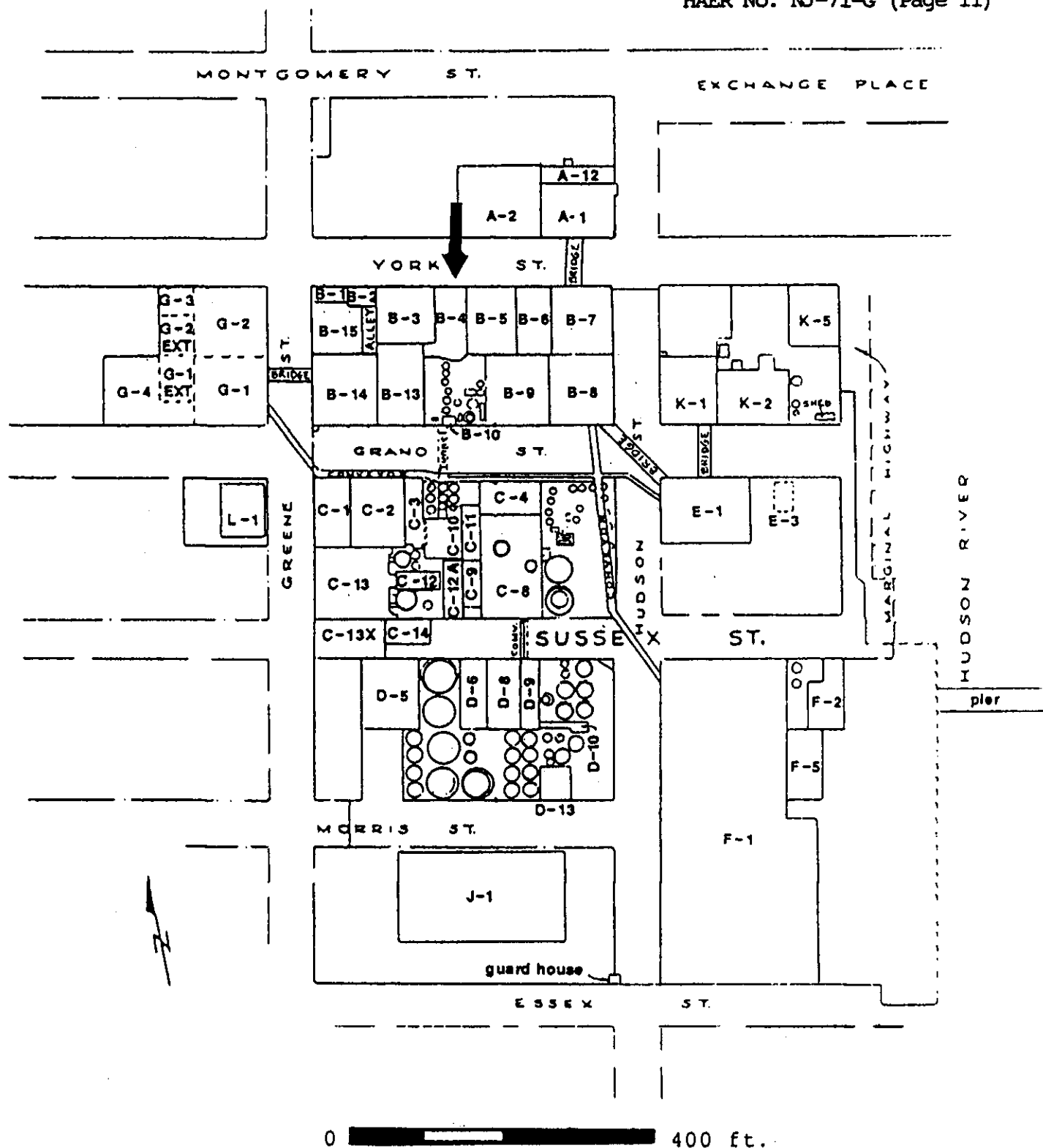


Figure 1. LOCATION OF B-4 AT COLGATE JERSEY CITY PLANT